**REMARKS**

The Office Action has been carefully reviewed. No claim is allowed. Claim 1 presently appears in this application and defines patentable subject matter warranting its allowance. Reconsideration and allowance are hereby respectfully solicited.

Claim 1 has been rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the enzyme of SEQ ID NO:1 or enzymes encoded by genes which will hybridize to SEQ ID NO:2 under specific conditions, does not reasonably provide enablement for any enzyme with the claimed properties. This rejection is respectfully traversed.

Claim 1 is now amended to recite a purified recombinant thermostable enzyme which has the amino acid sequence of a variant of SEQ ID NO:1. Thus, applicants believe that the presently claimed recombinant thermostable enzyme does not read on all enzymes which have an amino acid sequence not identical to SEQ ID NO:1 but rather reads only on those variants of SEQ ID NO:1 which are obtainable from SEQ ID NO:1 by recombinant DNA technology and which have the recited physiochemical properties. The amendment to claim 1 is fully supported by the specification at pages 26-28.

Applicants submit that it would be routine experimentation for one of skill in the art to obtain variants of SEQ ID NO:1 using recombinant DNA technology and to screen the variants to determine if they have the physicochemical properties recited in claim 1.

Reconsideration and withdrawal of this rejection are therefore respectfully requested.

In view of the above, amended claim 1 complies with 35 U.S.C. §112 and defines patentable subject matter warranting their allowance. Favorable consideration and early allowance are earnestly urged.

Respectfully submitted,

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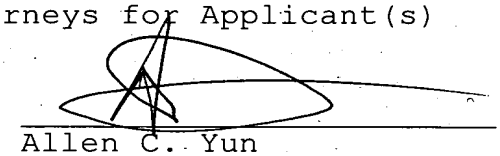
By: 
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**"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**

Claim 1 has been amended as follows:

1(Amended). A purified recombinant thermostable enzyme which has an amino acid sequence of a variant of SEQ ID NO:1, said amino acid sequence being obtainable from SEQ ID NO:1 by recombinant DNA technology, and which has the following physicochemical properties:

(1) Action

Forming non-reducing saccharides having a trehalose structure as an end unit and having a degree of glucose polymerization of at least 3 from ~~maltotetraose or~~ reducing amylaceous saccharides having a degree of glucose polymerization of at least 3;

(2) Molecular weight

About 69,000-79,000 daltons on sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(3) Isoelectric point (pI)

About 5.4-6.4 on isoelectrophoresis;

(4) Thermostability

Substantially not inactivated even when incubated in an aqueous solution (pH 7.0) at 85°C for 60 min.; and

(5) ~~Amino~~Partial amino acid sequence

~~An amino acid sequence which is not identical to SEQ ID NO:1 but which has physicochemical properties of (1) to (4) inherent to a thermostable enzyme of SEQ ID NO:1, said amino acid sequence comprising~~Having an amino acid sequence of at least two contiguous amino acid residues in SEQ ID NO:3 and/or SEQ ID NO:4 and being encoded by a chromosomal DNA which hybridizes to a probe having the nucleotide sequence of 5'-AAYYTNTGGTAYTTYA ARGA-3' (SEQ ID NO:7) and a probe having the nucleotide sequence of 5'-GARGARTGGCAYWSNATHAT-3' (SEQ ID NO:8).